Date: Tue, 16 Mar 93 11:48:20 PST

From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>

Errors-To: Info-Hams-Errors@UCSD.Edu

Reply-To: Info-Hams@UCSD.Edu

Precedence: Bulk

Subject: Info-Hams Digest V93 #329

To: Info-Hams

Info-Hams Digest Tue, 16 Mar 93 Volume 93 : Issue 329

Today's Topics:

75 Ohm Hardline, How to Use?
[Second try] Want info on RS232 commands for ICOM radios
A.R.E.S./R.A.C.E.S.

ALERT: Minor Geomagnetic Storm Alert - 15 Mar Cleaning Air Variable Caps. Daily Solar Geophysical Data Broadcast for 14 March GMRS Frequencies - whats the scoop?

> Heath SB-610 KA9Q source thanks

License Delays (Another Data Point)
Looking for "Solid Tubes" for Drake RX-4C
New AEA unit - replace PK-232?
Newbie question: What is iambic?

TS-50 Impressions
VHF Car Antenna: Update
VK2SG RTTY DX Notes, 12 March

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu> Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu> Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available (by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text herein consists of personal comments and does not represent the official policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 16 Mar 1993 15:02:38 GMT

From: usc!howland.reston.ans.net!gatech!kd4nc!ke4zv!gary@network.UCSD.EDU

Subject: 75 Ohm Hardline, How to Use?

To: info-hams@ucsd.edu

In article <14570694@hpnmdla.sr.hp.com> alanb@hpnmdla.sr.hp.com (Alan Bloom)
writes:

>In rec.radio.amateur.misc, gary@ke4zv.uucp (Gary Coffman) writes:

>>This is probably the best solution. The ZD Engineering transformers are >>quarterwave sections of air line. They are designed to fit directly on >>the CATV cable through a compression fitting (supplied), and they have >>a type N fitting on the other end. Being quarterwave lines, they are >>frequency selective, but do fine across the important parts of 2 meters >>and 70 cm. Considering the cost of hardline connectors, ZD is a bargain.

>Seems like the 2 meter version should also work on 432 MHz. (3/4 wave >is an odd multiple of 1/4 wave.) Then you could use the same coax for >both bands, with an antenna switch up on the tower.

Yeah, I tried that, but for satellite you want duplex so I got a set of the 70 cm transformers for the other line. I used to have a box at the tower top containing several Transco relays in a matrix and a couple of preamps, but CATV cable is too cheap (I got a free spool) to bother with the hassle of a bunch of very expensive relays at tower top. Now I have two transmit lines of CATV coax, and two receive lines of 9913 on the tower for 145 and 435 MHz. Only two TR relays are required at the power level I'm using. If I were running high power, I'd need two sequenced relays per band. For 1269 MHz I remote mount the transverter and amp in a box on the tower and run 9913 down to the two meter IF rig. Even CATV line has too much loss at 1269 MHz. I run power and control cables through EMT conduits to the tower top box.

Gary

_ _

Gary Coffman KE4ZV | You make it, | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | we break it. | uunet!rsiatl!ke4zv!gary
534 Shannon Way | Guaranteed! | emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244 |

Date: 16 Mar 93 14:36:46 GMT

From: usc!cs.utexas.edu!uwm.edu!caen!rphroy!trux!car@network.UCSD.EDU Subject: [Second try] Want info on RS232 commands for ICOM radios

To: info-hams@ucsd.edu

I need the command list for controlling ICOM radios via their RS232 ports.

Does anyone have this information? Or, does anyone know where I can get it?

Thanks,

car.

- -

Christopher A. Rende Central Cartage (Nixdorf/Pyramid/SysVR2/BSD4.3) uunet!rphroy!trux!car Multics,DTSS,Unix,Shortwave,Scanners,UnixPC/3B1 car@trux.mi.org Minix 1.2,PC/XT,Mac+,TRS-80 Model I,1802 ELF trux!ramecs!car "I don't ever remember forgetting anything." - Chris Rende

Date: 16 Mar 1993 17:14:47 GMT

From: topaz.bds.com!topaz.bds.com!ron@uunet.uu.net

Subject: A.R.E.S./R.A.C.E.S.

To: info-hams@ucsd.edu

> Well, last night we had activated A.R.E.S. and Skywarn here in RI.

In Northern Virginia, Skywarn was up continuously as were the Emergency HF nets and several VHF operations. I spent all day Saturday at the Red Cross which was providing emergency 4WD transportation, primarily for medical personnel to get to work. However we also did end up transporting two medical cases to the hospital because the County emergency med was over capacity. 2M was used to provide links to the 4WD vehicles (either driven by hams or having a ham run shotgun) to provide dispatch, have directional assistance, and to phone the people back we were providing transport to let them know we had arrived in several instances. The other purpose is to keep tabs on the vehicles in case they ended up needing assistance.

-Ron

Date: 15 Mar 93 17:31:12 GMT From: news-mail-gateway@ucsd.edu

Subject: ALERT: Minor Geomagnetic Storm Alert - 15 Mar

To: info-hams@ucsd.edu

MINOR GEOMAGNETIC STORM ALERT

ISSUED: 14:00 UT, 15 MARCH

ATTENTION:

A sudden storm commencement was observed at 05:26 UT and measured 20

gammas by the Boulder USGS magnetometer. This marked the arrival of the anticipated disturbance launched by the last M7.0/3B proton flare. The disturbance was tardy. Geomagnetic activity increased following the arrival of the disturbance to major storm levels. Major to severe storming has been observed over the high latitude regions. Activity surpassed the minor storm threshold at 12:00 UT on 15 March and is continuing in progress. There is a small chance this storm may be upgraded to a major category event.

Activity is expected to remain at mostly minor storm levels with periods of major storming possible over the next 12 to 24 hours. Stabilization should begin to set in on 16 March.

HF radio propagation conditions deteriorated with the arrival of the disturbance. Strong fading, multipath activity, and absorption has been observed with this activity. Night-sector propagation above 10 MHz has been difficult. Transpolar and transauroral propagation has suffered the most severe signal degradation. Day sector propagation will be the most stable. Expect similar conditions to persist for the next 18 to 24 hours (until approximately 15:00 UT on 16 March). Improvements are expected thereafter over all regions. Gradual improvements may be realized over the low and middle latitudes by the end of this UT day, although night-sector propagation over these regions will remain unstable and below-normal.

** End of Alert **

Date: Tue, 16 Mar 1993 16:21:45 GMT

From: usc!howland.reston.ans.net!gatech!mailer.cc.fsu.edu!geomag!

zateslo@network.UCSD.EDU

Subject: Cleaning Air Variable Caps.

To: info-hams@ucsd.edu

In article <1993Mar15.232230.23383@kpc.com> nat@kpc.com (Natarajan Gurumoorthy)
writes:

> [...]

> One of the caps I picked up is a differential cap (2 sections of the same >size with the rotor being the common terminal to the 2 caps). Any idea why it is >called a differential cap?

> [...]

There are two different kinds of variable caps that fit your description. A differential cap is arranged so that as the capacitance of one section increases, the other decreases. A regular "split-stator" cap has both sections increasing in tandem.

Differential caps are used in odd situations like temperature

compensation (two fixed caps with different temperature coefficients are attached to the stators) and some weird network circuits. Split-stator caps are used anytime you want two capacitors that track each other, or to create a variable cap with no wiper (leave the rotor unconnected, hook things up to the two stators, and maximum C will be 1/2 that of either section alone).

Ted Zateslo, W1X0 zateslo@geomag.gly.fsu.edu

Date: 15 Mar 93 21:14:30 GMT From: news-mail-gateway@ucsd.edu

Subject: Daily Solar Geophysical Data Broadcast for 14 March

To: info-hams@ucsd.edu

!!BEGIN!! (1.0) S.T.D. Solar Geophysical Data Broadcast for DAY 073, 03/14/93 90-AVG=136 BKI=3222 4434 BAI=016 10.7 FLUX=136 SSN=066 BGND-XRAY=B3.2 FLU1=8.9E+06 FLU10=1.1E+05 PKI=3233 4334 PAI=016 BOU-DEV=020,015,019,017,048,049,037,056 DEV-AVG=032 NT SWF=00:000 XRAY-MAX= C1.6 @ 1442UT XRAY-MIN= B1.8 @ 0705UT XRAY-AVG= B6.6 NEUTN-MAX= +003% @ 2015UT NEUTN-MIN= -001% @ 1920UT NEUTN-AVG= +0.9% PCA-MAX= +0.1DB @ 2355UT PCA-MIN= -0.2DB @ 1825UT PCA-AVG= -0.0DB BOUTF-MAX=55412NT @ 0345UT BOUTF-MIN=55365NT @ 1849UT BOUTF-AVG=55398NT GOES7-MAX=P:+125NT@ 1821UT GOES7-MIN=N:-011NT@ 1043UT G7-AVG=+082,+039,+009 GOES6-MAX=P:+138NT@ 1807UT GOES6-MIN=N:-096NT@ 0401UT G6-AVG=+095,-003,-052 FLUXFCST=STD:130,130,135;SESC:130,130,135 BAI/PAI-FCST=035,015,010/025,020,015 KFCST=5555 5551 1333 3333 27DAY-AP=004,007 27DAY-KP=1112 2111 1233 3111 WARNINGS= ALERTS= !!END-DATA!!

NOTE: The Effective Sunspot Number for 13 MAR 93 was 65.0. This value should be used as an input into propagation prediction software such as IONCAP or PROPHET. It is valid for the previous UT day, not the date of the report.

Date: 16 Mar 93 15:32:53 GMT From: news-mail-gateway@ucsd.edu

Subject: GMRS Frequencies - whats the scoop?

To: info-hams@ucsd.edu

I was looking at a DAK catalog recently and they were selling a radio that transmitted on either 462.575 or 462.625. It was described as "GMRS" and supposedly needs some kinda license (FCC application included with purchase).

I was wondering if anyone could tell me a little about this?

- . What license is needed?
- . Are there any frequencies besides the ones above?
- . What does GMRS stand for?
- . The info in the catalog suggested that this would be a great 'family' radio (and that only one license is needed), but I was listening last night and it sounded like it was being used by some security guards at a business, this seems kind of conflicting.
- . What kind of transmitting power is allowed?
- . Would this be worth investigating while I study for my ticket?

Thanks!

John

isenhour@lambic.fnal.gov

Date: Tue, 16 Mar 1993 14:57:36 GMT From: RICEVM1.RICE.EDU!LINSCOT@rice.edu

Subject: Heath SB-610 To: info-hams@ucsd.edu

In article <C3ypny.F3H@unccsun.uncc.edu>
wlhamaty@unccsun.uncc.edu (W Luke Hamaty) writes:

> I need schematics for a Heathkit SB-610 monitor scope. I got one > cheap that almost works. I think I see the problem, but I can't > be real sure without the specs. The manual would be nice too, but > I can do without it. Can anyone out there please help?

The Heath Company is alive and well, but is specializing in educational items. I just bought a copy of a manual for a computer kit that was sold in the 70's. Their number is (616) 925-6000. (I am not affiliated with Heath - built a lot of their ham gear, though!)

- Steve - W5EGP

Date: Mon, 15 Mar 93 23:10:37 CST

```
jim@uunet.uu.net
Subject: KA9Q source thanks
To: info-hams@ucsd.edu
acm139@ccs.northeastern.edu (Scott Ehrlich) writes:
> I just wanted to thank everyone for their responses regarding my posting for
> KA90's TCP/IP source code. The result was that the FTP site ucsd.edu
> was the official site for this software. Also, a copy of the source can
> also be found at world.std.com (192.74.137.5) in /pub/hamradio/pc (the World
> hamradio FTP area is maintained by the Boston Amateur Radio Club).
> Again, thank you all for your help.
I have the E020603.ZIP executable. Do I need the source too?
Jim
VE4JAF
jim@inqmind.bison.mb.ca
The Inquiring Mind BBS, Winnipeg, Manitoba 204 488-1607
_____
Date: 15 Mar 93 19:12:51 GMT
From: news-mail-gateway@ucsd.edu
Subject: License Delays (Another Data Point)
To: info-hams@ucsd.edu
I tested for Tech+ on January 6th. Received the license on
Friday March 12th (One day shy of nine weeks!). License was
dated effective March 3rd.
                       - Warren (KD4YRN)
Warren E. Lewis
                                              saswel@unx.sas.com
Graphics Division
                                            (919) 677-8001 x6542
SAS Institute Inc.
                                                         PP-ASEL
Cary, NC
                                            KD4YRN
                                                        DOD#0021
_____
Date: Tue, 16 Mar 1993 16:51:30 GMT
From: sun-barr!cs.utexas.edu!utnut!torn!watserv2.uwaterloo.ca!watmath!watcgl!
```

watpix.uwaterloo.ca!awpaeth@ames.arpa

From: newsflash.concordia.ca!mizar.cc.umanitoba.ca!bison!sys6626!inqmind!

Subject: Looking for "Solid Tubes" for Drake RX-4C To: info-hams@ucsd.edu

Sartori Associates - W5DA seems to be out of business. I'm looking for the "solid tubes" they offered in the 70's and 80's for the Drake line. If anyone can provide leads or merchandise, I'd be interested in buying or swapping gear. I'm specifically interested in 6EJ7/6HS6 (mixers).

PS - I've found schematics for the innards of many of these but at this point am more interested in finding the original article. Also, I saw an allusion to a solid state tube in a Sherwood Engineering ad. Did they buy up the old stock?

/Alan Paeth KD3XG/VE3AWP

Date: Tue, 16 Mar 1993 15:52:38 GMT

From: usc!howland.reston.ans.net!gatech!concert!rock!cole@network.UCSD.EDU

Subject: New AEA unit - replace PK-232?

To: info-hams@ucsd.edu

In article <fred-mckenzie-150393183415@k4dii.ksc.nasa.gov> fredmckenzie@ksc.nasa.gov (Fred McKenzie) writes:
>In article <9303152055.AA23024@ucsd.edu>,
>CELLIS%BROCKVMA.BITNET@cunyvm.cuny.edu wrote:
>> I heard from a friend this weekend that there is a new AEA unit out >> not the DSP boxes, but a replacement for the PK-232. I have let my QST
>> lapse, so I haven't seen any ads. Anybody care to fill me in? Thanks.
>
>Carlton>
>I heard the same report. So, this weekend at the Orlando Hamfest, I asked
>the AEA rep. about it.

>AEA claims that the new unit, the PK-300, PK-400 or PK-600 (I forget), is a >new model in the line, but doesn't replace the PK-232. (Amateur Electronic >Supply has had it for several weeks.)

>At the same time, there is an upgrade available if you have the MBX version > of the PK-232, that includes Pactor.

>73, Fred, K4DII >

>fred-mckenzie@ksc.nasa.gov

It's called the PK-900, and it's designed to "fill the gap" between the PK-232 and the DSP-?232.

The obvious difference is the LCD display on the 900 vs. the 232's LEDs. Also, the 900 can run both it's ports simultaneously, whereas the 232 can only run one at a time. There are other differences that I can't recall.

I seriously considered buying one this past weekend, but I really didn't feel I needed what it offered, so I bought the 232 (and saved \$180 ;) In the two days of playing with the 232, I've had nothing but fun.

If you like (and if I still have it), I could route you/post a synopsis of what I got in the mail about it (feature breakdown, unit comparisons, etc).

True, you need the 232 MBX version to use the Pactor upgrade, which AEA is supposedly shipping. I think the cost is around \$75, which I hope to be spending soon.

Note: I have no ties with AEA. I just like their data controllers!

73 de KC4WEJ(/AE!) Derrick

- -

"Retrieving file systems sizes from install media...expr: syntax error expr: syntax error"

-- Seen while attempting to install AIX

Date: 15 Mar 93 21:20:53 GMT From: news-mail-gateway@ucsd.edu

Subject: Newbie question: What is iambic?

To: info-hams@ucsd.edu

You remebered you english lessons!

For example, Iambic pentameter is:

didah didah didah didah

The stress is on the dah.

In a paddle keyer it means that if you depress both paddles together then you will get a sucession of didahs or dahdits (depending on whether the dit or dah paddle closes first) rather than a dit and a succession of dahs or a dah and sequence of dits. Why do it this way? It removes the highest frequency movement for sending morse otherwise you would have to do a lot more finger movement for letters like C.

To send a C: squeeze both paddles together; make sure the dah paddle (normally the thumb/left hand paddle) closes first; hold till you get the letter out.

didahdidah.

For a period just hold it closed a little longer:

didahdidahdidah.

Most keyers also have a meomory that will remeber that you hit one paddle whilst holding the other down and insert that element when the current element ends.

For example to send Q: hold down the dah paddle. part way though the second dah, tap the dit paddle (keep the dah paddle held down). This will send dahdahdidah.

Kevin Purcell N7WIM / G8UDP
a-kevinp@microsoft.com
"We conjure the spirits of the computer with our spells"

Date: Tue, 16 Mar 1993 15:30:16 GMT

From: pacbell.com!att-out!cbfsb!cbnewsb.cb.att.com!feg@network.UCSD.EDU

Subject: TS-50 Impressions To: info-hams@ucsd.edu

In article <fred-mckenzie-150393183151@k4dii.ksc.nasa.gov> fredmckenzie@ksc.nasa.gov (Fred McKenzie) writes:
>

>I noticed that nearby stations above about 30 dB over S-9, sound distorted, >even with the "AIP" feature turned on. (I also noticed that on my TS-690.) > I've never noticed such overload on my older TS-120 or TS-430, so it >appears to be a step backwards. However, it may be an unfair comparison if >the newer radios are much more sensitive. If so, their true dynamic range >may be the same, just shifted downward.

This does not sound good. Sensitivity has never been a problem for receiver design for decades; signal overload has. Do you have equipment to make a more objective comparison between your TS-430 and this TS-50?

Forrest Gehrke feg@dodger.att.com k2bt

>As of last Friday, the AT-50 automatic tuners had been shipped but not >received, by any of the dealers who were at the Orlando Hamfest. I >purchased my TS-50 from Amateur Electronic Supply in Orlando. I got the CW >filter and high-accuracy options. However, none of the other options >unique to the TS-50, were available yet. As of this weekend, spec sheets >and price lists are available.

>73, Fred, K4DII > >fred-mckenzie@ksc.nasa.gov

Date: Tue, 16 Mar 1993 15:06:28 GMT

From: sdd.hp.com!apollo.hp.com!hpwin052!hpqmoea!dstock@network.UCSD.EDU

Subject: VHF Car Antenna: Update

To: info-hams@ucsd.edu

Jay, you might have seen less difference if the outside antenna had fallen off and the inside box had stayed in place. Somehow it doesn't seem worth the bother of trying to glue the devil back on, though, to complete the experiment and compare notes with Gary....

My 4x4 cost me over \$50,000 at the then exchange rate (things are about double US prices, here) But I drilled a hole! Sandpiper make a neat 2m/70cm antenna that looks like a slightly larger cellphone antenna, and sell a real cellphone antenna to screw on when you sell the vehicle. It's mounted near the front, driver's side of the roof so I can reach out to fold it over for multi-storey car parks. It draws no attention, and thieves have learned that stolen cellphones have no resale value - so they are not attracted by anything that looks like one

David GM4ZNX

Date: Mon, 15 Mar 93 17:00:52 GMT

From: usc!zaphod.mps.ohio-state.edu!mstar!n8emr!bulletin@network.UCSD.EDU

Subject: VK2SG RTTY DX Notes, 12 March

To: info-hams@ucsd.edu

| Automatic relayed from packet radio via | | N8EMR's Ham BBS, 614-895-2553 | |

VK2SG RTTY DX Notes, 12 March VK2SG RTTY DX Notes for week ending 12 March 1993 (BID RTDX0312)

On Thursday 11 Mar., N9NS/KH5K said QRV RTTY Friday 12 Mar.

Syd, VK2SG expects to walk out of the convalescent home in two to three weeks. He sends 73 to all.

Thanks to AEOQ, CE3GDN, DJ3IW and the Central Europe Packet Cluster, HC5K, I5FLN and the IK5PWJ Packet Cluster, K0HZR, NT3B, N5PSI, VK2EG, WA1MPB, WB2CJL, WF5T, ZS5S, and the NJ0M node of the Twin Cities DX Packet Cluster Network.

Bandpass:

```
Fri 5
0121-21086 KH6/JA3BSH
0656-14088 HK0/AA5AU QSL home CBA
1314-21083 K30QF/T5
1556-21084 OH2IJ
1614-21085 5R8DG
1636-21093 SV2BBJ
1643-21088 7Q7ZZ
1822-14083 4K3/UW1ZU
1825-14083 VU2DSD
1916-28085 HK0/KB5GL QSL KA6V
2102-14084 9H1ED
2339-14073 9K2EC FEC
Sat 6
1040-28090 OD5PL
1340-21087 9K2WA
1347-28087 SV1ANW
1525-21087 OD5PL
1645-21084 S58AA
1657-21084 OK1AJN
1826-21087 CT3CU QSL W2ZZ
2220-21085 VP8BFH
2242-21090 HL5FBT
Sun 7
0013-21089 KL7WP
0043-21089 TU5BB
1121-21084 707ZZ
1234-14086 ES7QF XYL 'Milvi'
1510-28087 TY1PS
1635-21089 C31HK
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1650-14082 UA1ZE
1651-28086 ISOHME
1653-14086 OX3BV
1737-21086 7Q7ZZ QSL JA1UMN '93 or later CBA
1740-21085 OK1AJN QSL POB 127, 46601 Jablonec, Czech Republic
1810-21069 CU1AC ARQ
Mon 8
0337-14083 PZ5EL QSL FY5CL
1256-14076 C6A/W4YF FEC
1738-14085 XX9LF QSL Box 440, Macao
1842-14087 TY5YP
1847-14081 A45ZX
1858-14086 HZ1AB
1911-14084 SV9AKD Crete
1941-14091 9K2WA
2147-14088 4X6U0 QSL WB3CQN
2240-21086 YN5JAR
Tues 9
0305-14083 HC3AP
0307-14084 LU6FEM
0127-14082 HR1RBB
1430-14082 RHOY
1435-14086 R3ARES QSL WB4KZL
1658-14087 5R8DG
1810-14085 NP2G
Wed 10
0134-14081 KN4TX/HK3
1323-21085 TA2D
1555-21085 SV1LK
1640-21083 9J2HN
1648-21088 EA8A0E
2100-14088 OD5PL
2154-14088 J88BP
2243-21087 UA0KZ
Thurs 11
0212-14084 HI8TLX
0427-14088 HR1RBB
1516-21084 OM3CPS
```

Notes of Interest:

Reminder: BARTG Contest 0200Z 20 March-0200Z 22 March.

Glenn, AEOQ, will operate in the BARTG Contest from Belize as V31RY. John, KTOM, and Leo, WNOB, will be with Glenn 19-28 March, operating as V31WN and V31OB respectively. QSL V31RY to WNOB.

Jay, WS7I, will again operate HC8J from the Galapagos in the BARTG Contest.

Chris, GU4YMV will be an all band entrant in the BARTG Contest. QSL only direct with IRC or g/s.

For next week's bulletin, please address your Bandpass and Notes of Interest to I5FLN @ ZS5S.ZAF.AF, OR I5FLN @ 9X5LJ.#KGL.RWA.AF

FLASH!

Paul, WF5T, and James, N3CJL, will operate two stations from Uganda (5X), for two and a half weeks, in late April-early May. Paul will operate RTTY, and CW, while James will do SSB. They will pick up their licenses upon arrival. QSL RTTY and CW QSOs to PAUL's '93 CBA. More details later.

73 Good Hunting DE Jules W2JGR @ CE3GDN.#STGO.CHL.SA /EX
SP KT7H @ N7DUO.WA.USA

Date: 16 Mar 1993 17:06:50 GMT

From: topaz.bds.com!topaz.bds.com!ron@uunet.uu.net

To: info-hams@ucsd.edu

References <1m7bck\$fpn@uxa.ecn.bgu.edu>, <103360159@hpfcso.FC.HP.COM>, <1993Mar13.191255.8724@n8emr.cmhnet.org>
Subject : Re: DESPERATE...NEED TO KNOW FACTS CONCERNING LEGALITY

- > This is silly..... what experimentation can you do out of band. Its
- > illegal to transmit out of band period. (ok except in an emergency).
- > The TX out of band is just an effect of RX out of band.

When operating through a transverter it's not always convenient to make the input frequency one of the HF ham bands. I've got one that uses a 24MHz IF.

-Ror	1				
End	of	Info-Hams	Digest	V93	#329
